

Initial Scoping - Olympic Dam Expansion Issues 22 Feb 2019

David Noonan B.Sc., M.Env.St., Independent Environment Campaigner

The BHP Roxby ‘Major Project’ Copper & Uranium Mining Proposal:

‘Olympic Dreams: Major step for \$3 billion, 1800-job North mine expansion’ (15 Feb, p.1 *promo* The Advertiser) as SA Gov. grant’s “Major Project” status to assess BHP’s latest expansion plan, to:

- Increase copper production from 200,000 tonnes per annum to 350 000 tpa, with an **increase in ‘associated products’ – uranium oxide: from 4 000 to approx. 6 000 tpa;**
- Use the outdated 1982 *Roxby Downs Indenture Ratification Act* to control this EIS assessment under the Mining Minister, with the Indenture over-riding other SA legislation and subjecting Aboriginal Heritage to a constrained version of a 1979 Act across BHP Olympic Dam operations in the Stuart Shelf Area (covering 1 per cent of SA) - rather than the contemporary standards, process and protections in the *Aboriginal Heritage Act 1988*;
- Use a since replaced 1993 *Development Act* and “Major Project” status Sec. 46 (1) that *excludes* Appeals regarding the Environment Impact Statement (EIS) process and outcomes;
- Use a ‘one stop shop’ Bilateral Assessment Agreement leaving the SA Gov. to conduct the assessment, including on *Matters of National Environmental Significance* (MNES) under the Commonwealth *Environment Protection* legislation (EPBC Act 1999), on **nuclear actions** and on the fragile **Mound Springs Endangered Ecological Community** - reliant on GAB waters;
- Use the **SA Gov. Declaration** to “Exclude” existing mining and “enabling activities” up to 200 000 tpa Cu & associated products and resultant impacts from this EIS assessment, “such as: waste treatment, storage and disposal, including but not limited to, Tailings Storage Facility 6, Evaporation Pond 6, additional cells for the contaminated waste disposal facility, and development of a low-level radioactive waste storage facility”;
- And to increase extraction of Great Artesian Basin fossil water “up to total maximum 50 million litres a day annual average” (above the volumes last assessed in 1997 and set at a max of 42 Ml/day) and give BHP rights to take GAB water - potentially up to 2070, with “any augmented or new water supply pipeline from the GAB along with any other wellfield”;

To follow the Project, see the SA.GOV.AU “**Olympic Dam Production Growth Plan**” at:

<https://www.sa.gov.au/topics/planning-and-property/land-and-property-development/building-and-property-development-applications/major-development-applications-and-assessments/proposals-currently-being-assessed/olympic-dam-production-growth-plan>

And the “**Olympic Dam Major Project Declaration**” in SA Gov. Gazette (14 Feb 2019, p.461-462) at:

http://governmentgazette.sa.gov.au/gazette-archive?year_month%5Bvalue%5D%5Bmonth%5D=2&year_month%5Bvalue%5D%5Byear%5D=2019

Initial Scoping - Olympic Dam Expansion Issues

The BHP Roxby ‘Major Project’ Copper & Uranium Mining Proposal	1
Uranium responsibilities and alternative ‘No Uranium Recovery’	2
Mine Expansion Assessment – to drive down Standards?	3
Radioactive Tailings Management	4

Uranium responsibilities and alternative ‘No Uranium Recovery’

Since opening in 1988, Roxby mine has produced toward **80 000 tonnes of uranium oxide** and **left toward approx. 200 million tonnes of radioactive tailings** to remain above ground on-site for-ever.

While this Roxby project is assessed in 2019-20 to a cited BHP Board decision in late 2020, the Rio-Tinto Ranger open pit mine will close and go onto rehabilitation, leaving BHP’s Roxby mine and General Atomics Beverley 4 Mile mine in SA as the only operating uranium mines in Australia.

The Nuclear Free Movement & allies have a responsibility to contest this BHP Roxby mine expansion:

- Australian uranium (from both Roxby & Ranger mines) **fueled the Fukushima nuclear disaster** in 2011, always produces intractable nuclear waste, and present’s ongoing dual-use nuclear weapons risks and untenable nuclear accident risks. Australia’s uranium sales deals are also marked by secrecy;
- Australian uranium is routinely sold to nuclear weapon states failing to honor their NPT nuclear disarmament obligations, to non-transparent regimes in China (and previously Russia), and **is intended to go on to unstable regions**: to the UAE in the Middle East, to Ukraine, and to India – outside of the NPT and in a nuclear arms race with Pakistan.

This BHP Roxby expansion is intended to increase and to ‘lock in’ Australia’s complicity in untenable nuclear risks & impacts, rather than the needed *phase out* of uranium mining and export sales deals.

In response to the prior BHP Olympic Dam open pit mine plan, the Australian Greens released a report by academic Dr Gavin Mudd “***The Olympic Dam Mega-Expansion Without Uranium Recovery***” (Dec 2010), with no uranium and only non-radioactive products to leave the Roxby mine.

In the public interest, this technically viable alternative mine configuration – with significant reduced water usage, should be re-appraised in light of this 2019 Roxby mine expansion plan, see the 2010 Report at: <http://users.monash.edu.au/~gmudd/files/Odam-Cu-only.pdf>

As Senator Scott Ludlam & SA Greens MLC Mark Parnell have said, this is **a challenge to BHP** and to the SA & Federal gov’s to assess credible alternatives with better environmental outcomes – both here & overseas, see the Report Launch at: <https://www.youtube.com/watch?v=8qAVtPYcNmU>

Note: Uranium has declined over time as a share of Olympic Dam revenue to less than 20 per cent.

ACF/ D Noonan have campaigned for ‘No Uranium Recovery’ at existing & any expanded Roxby mine.

Mine Expansion Assessment – to drive down Standards?

BHP will shortly release a formal Application to the SA Gov., the SA State Planning Commission & Mines Minister will decide the level of assessment and reporting requirements, and the SA Gov. release “*Guidelines*” to the EIS. **Public consultation & NGO input should occur on draft Guidelines.**

These Guidelines to the EIS are crucial to the credibility of the mine expansion assessment and this process is **likely to be conducted before the Federal election** and to be near binding thereafter.

There are a range of reasons for concern over this Roxby mine expansion project and assessment:

- Public interest appraisal of this 2019 project **needs to draw on analysis of** BHP Roxby operations from 2005-06 and expansion proposals, process, decisions & conditions to 2013;
- The outdated 1982 Indenture imposes extraordinary legal privileges and vested interests of the proponent, including over Aboriginal Heritage, that are intended to continue to apply;
- A new SA *Mining Act* currently before Parliament to apply updated standards to all other mining projects in SA **is not proposed to apply to SA’s largest mine: BHP Olympic Dam;**
- Roxby is also governed by the *Mine Works and Inspection Act 1920* which solely provides the powers for Mine Inspectors to enter & inspect and to make Orders, however the Depart has sought to repeal this Act and roll these powers over Roxby into the proponents Indenture;
- The SA Gov.’s Major Project Declaration has **sought to impose serious limitations on this assessment**, contrary to the standards, coverage, analysis and transparency that are required to inform good public interest decisions and conditions in this case;
- **Successive SA Gov.’s have failed to secure a Rehabilitation Bond over the Olympic Dam mine.** This process must now do so, requiring a new appraisal of liabilities over all mine operations: existing, enabling 200 000 tpa, and proposed expansion works and impacts;
- Olympic Dam should be subject to a statutory mandated 100 per cent Bond applying the ‘most stringent conditions’ over estimated Rehabilitation Liabilities to ensure full costs in radioactive ore mining are secured in advance. See D Noonan submission (April 2017) to the Federal Inquiry on Rehabilitation of Mining (due to report 20 March 2019):
<https://www.aph.gov.au/DocumentStore.ashx?id=3ecf8af6-a640-47d9-96c0-22c03df14728&subId=510447>
- **Radioactive Tailings Storages at Roxby are designed and operated to leak liquid wastes, with inadequate lining to cut costs.** The BHP open pit expansion proposal was also designed to leak. This 2019 expansion project is highly likely to be designed to leak and to cut costs by failing to require physical isolation of tailings from the environment for at least 10 000 years;
- **This assessment should include a range of alternatives** to the proponent’s vested interest preferences, including that the ‘No Uranium Recovery’ option to only trade in copper and other non-radioactive products should be assessed across all Roxby operations;
- **The SA Gov. has a significant conflict of interest** in this case and the ‘one stop shop’ Bilateral Assessment Agreement Clause 8.1, c (ii) seeks to constrain the coverage of Conditions applied by the Federal Minister. In practice, this Federal Liberal Gov. failed to impose Conditions on Radioactive Tailings Management in granting uranium mine Approvals in WA;
- **The next Federal Gov. must apply the ‘most stringent conditions’ on all uranium mining operations & reject ‘clearly unacceptable impacts’** on MNES under EPBC including on the fragile Mound Springs, as the State of South Australia can-not be relied upon to do so.

Radioactive Tailings Management

The 1982 Indenture places an onus on the SA Gov. to grant approvals on terms to facilitate mining.

Roxby Tailings Storage Facilities are to be covered and 'disposed' above-ground as final landforms.

Civil society must not accept continued downgrade of standards in Roxby uranium mine expansions.

A full comprehensive safety assessment to determine long term risks from radioactive tailings must be a core required part of this assessment AND apply the 1999 standards set at Ranger mine.

The most recent assessment of Radioactive Tailings Management at Roxby granted Federal and SA Gov. Approvals (Nov 2011) to vastly increase tailings production (from the now lapsed open pit mine proposal) *prior to* actually carrying out this type of safety study on the long term risks from tailings.

The 2011 Roxby Approvals downgraded the key 1999 standards applied to Ranger uranium mine.

Instead of Federal Gov. required final disposal of tailings (in to a pit) *"in such a way to ensure that:*

- i) The tailings are physically isolated from the environment for at least 10,000 years;*
- ii) Any contaminants arising from the tailings will not result in any detrimental environmental impact for at least 10,000 years;"*

Olympic Dam Condition 32 Mine Closure (Nov 2011) defers a **Mine Closure Plan** and only applies *unstated* environmental outcomes: *"that will be achieved indefinitely post mine closure"*, and:

"c. contain a comprehensive safety assessment to determine long term (from closure to in the order of 10,000) risk to the public and the environment from the Tailings Storage Facility and Rock Storage Facility."

Requiring outcomes to *"be achieved indefinitely"* does recognise that tailings risks are perpetual.

However, rather than specific high standards of outcome set at Ranger *for at least 10,000 years*, this 2011 approval has *unstated* outcomes and only references 10,000 yrs as a period of modelling study.

In April 2013 Condition 32 was amended to *further defer* the safety risk assessment, from *"within two years of the date of the approval"*, to: *"prior to the construction of the Tailings Storage Facility"*.

A **"No Uranium Recovery"** alternative leaves all uranium & associated radioactive decay products in the tails. Roxby mine extracts approx. 2/3 of the uranium from the ore, with 1/3 left in the tailings.

In current mining practice, tailings retain some 90 per cent of the radioactivity in the ore (given the decay product radionuclides remain, thorium & radium ect). Deporting all uranium to the tails doesn't affect the public interest requirement, in any case, to isolate tailings for over 10,000 years.

Note: BHP ["Tailings Facility Update"](#) (19 Feb 2019) claims a review shows *"no significant deficiencies"* at Olympic Dam Tailings Storage Facilities and says: *"BHP supports calls for greater transparency in tailings management disclosure"*. The BHP ["Dams and Tailings Management"](#) page cites *"establishment of independent Tailings Stewardship Boards to undertake reviews"*, and says: *"A trial of the stewardship program has been completed at our Olympic Dam asset in SA"*.